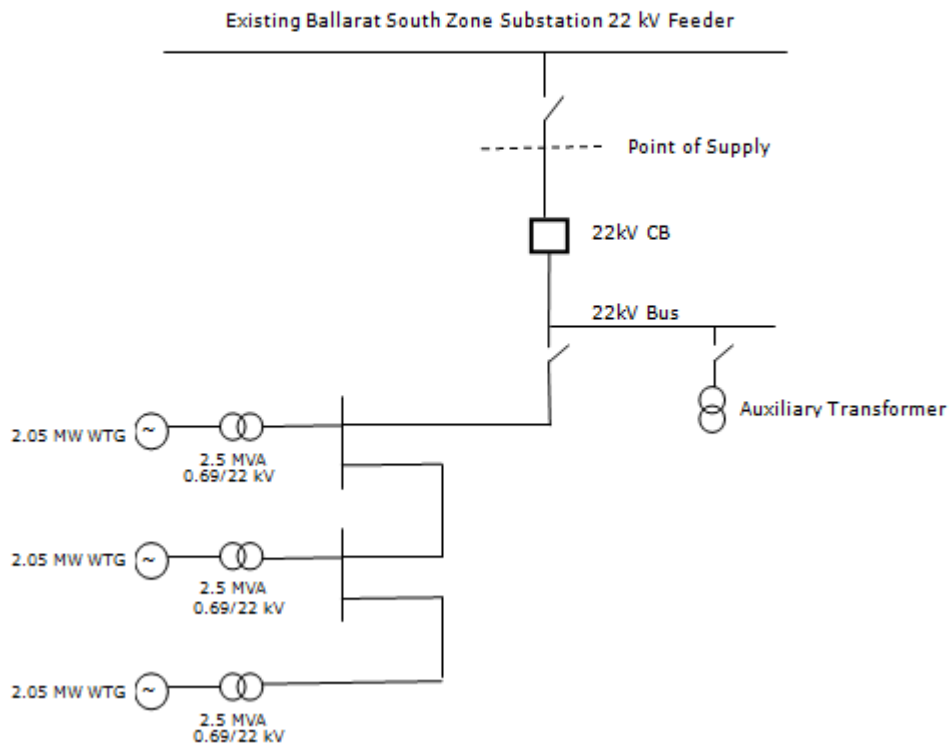




Register of connected Embedded Generators

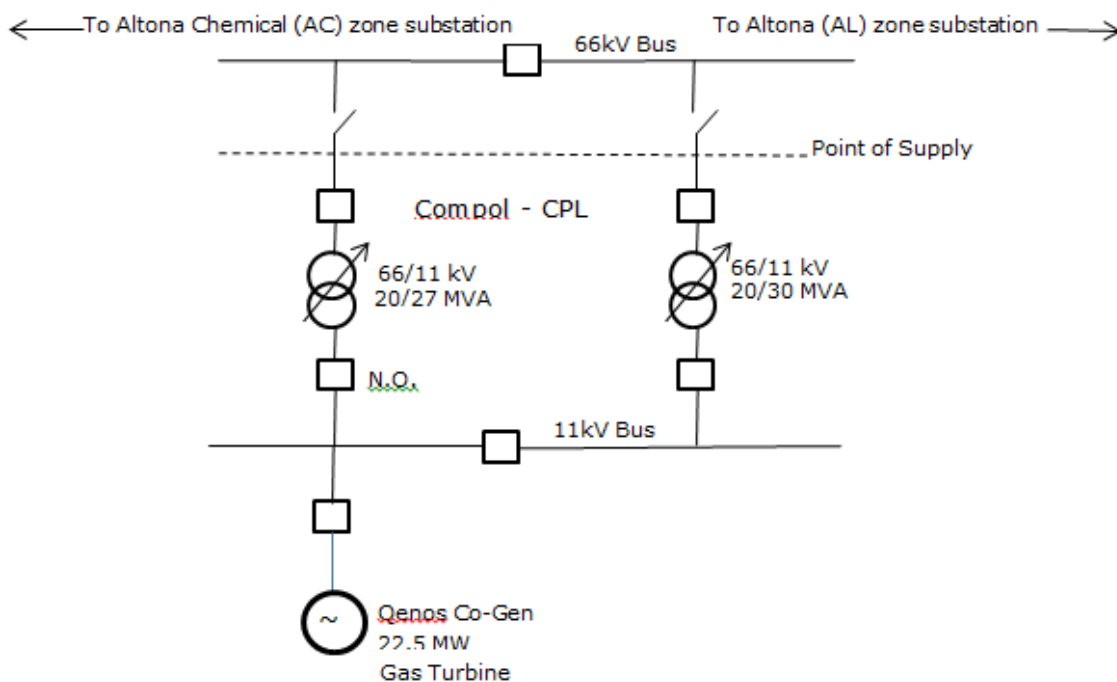
Name	Chepstowe Wind Farm
Location	30 km west of Ballarat, Victoria
Commissioning Date	March 2015
Technology of Generating Unit including make and model	3 x 2.05 MW REpower MM82 wind turbines - double fed induction generator (DFIG)
Maximum power generation capacity of all embedded generating units comprised in the relevant generating system	6.15 MW
Contributions to Fault Levels	3 ph = 0.42 kA
Size and Rating of relevant transformer	3 x 2.5 MVA (ONAN)
Single Line Diagram of the Connection Arrangement	See below
Protection Systems and Communication Systems	Overvoltage, ROCOF and overcurrent protection. No protection communication system.
Voltage Control and Reactive Power Capability	Power factor control. Reactive Power Capability - Import = 3.0 MVar, Export = nil

Chepstowe Wind Farm Connection Arrangement



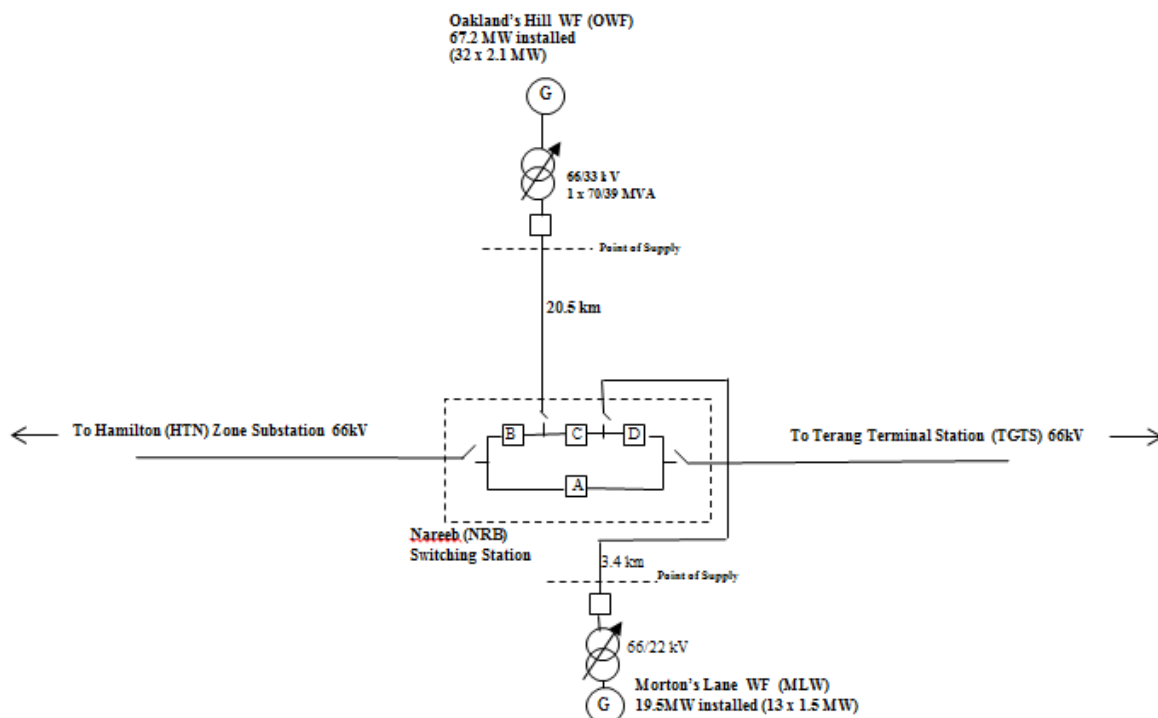
Name	Qenos Co-generator
Location	Kororoit Creek Rd, Altona, Victoria
Commissioning Date	January 2013
Technology of Generating Unit including make and model	Solar Titan 250 synchronous gas turbine generator
Maximum power generation capacity of all embedded generating units comprised in the relevant generating system	22.5 MW
Contributions to Fault Levels	3 ph = 0.84 kA, ph-g = 0.26 kA, ph-ph-g = 0.17 kA
Size and Rating of relevant transformer	1 x 20/27 & 1 x 20/30 MVA (ONAN/ONAF) (existing)
Single Line Diagram of the Connection Arrangement	See below
Protection Systems and Communication Systems	Duplicate pilot wire protection. Communications - optical fibre
Voltage Control and Reactive Power Capability	Voltage control - refer to Qenos. Reactive power capability = 6.8 MVar

Qenos Co-Generator Connection Arrangement



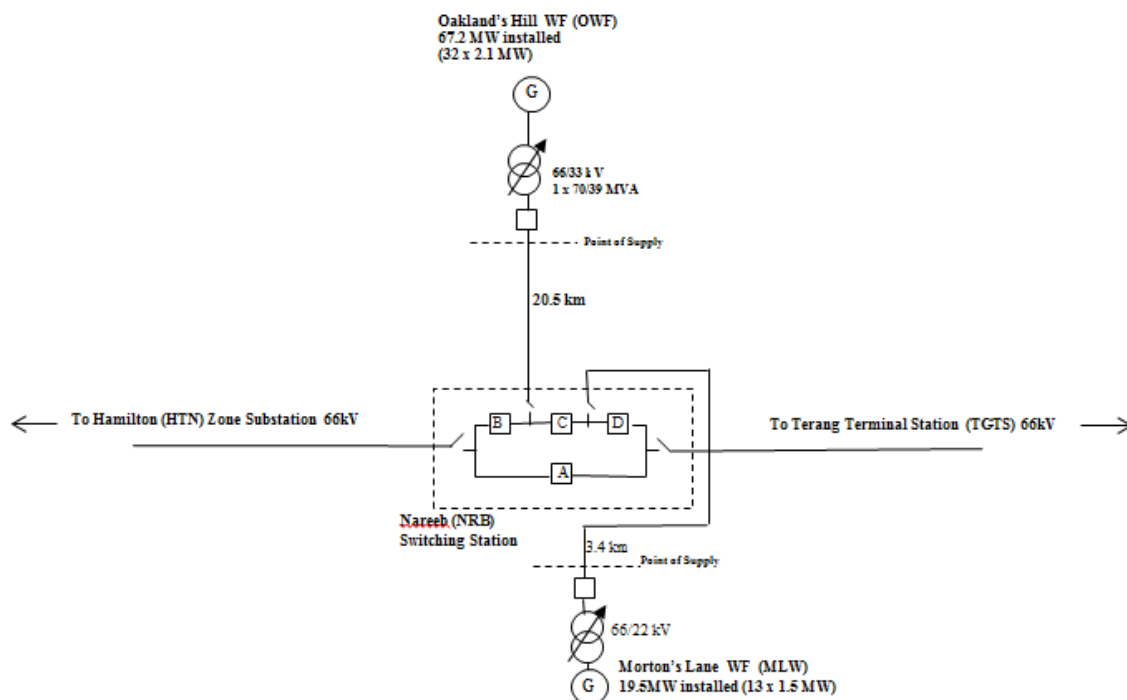
Name	Mortons Lane Wind Farm
Location	38 km east of Hamilton, Victoria
Commissioning Date	November 2012
Technology of Generating Unit including make and model	13 x 1.5 MW Goldwind GW82 Goldwind turbines - direct drive permanent magnet generator with full power converter
Maximum power generation capacity of all embedded generating units comprised in the relevant generating system	19.5 MW
Contributions to Fault Levels	1 kA (3 ph, ph-g & ph-ph-g)
Size and Rating of relevant transformer	25 MVA (ONAF)
Single Line Diagram of the Connection Arrangement	See Below
Protection Systems and Communication Systems	Duplicate current differential protection over optical fibre communications link between NRB and MLW
Voltage Control and Reactive Power Capability	Power factor control Reactive Power capability - Import =7.0 MVar, Export = nil

Mortons Lane and Oaklands Hill Wind Farm - Connection Arrangement



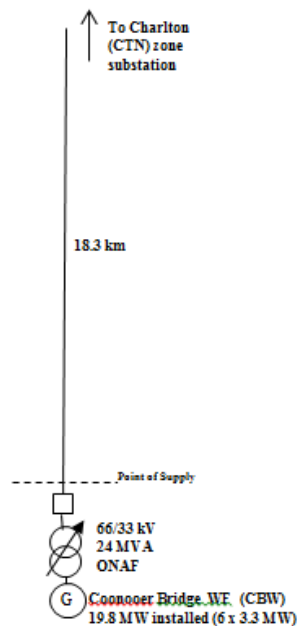
Name	Oaklands Hill Wind Farm
Location	3 km south of Glenthompson, Victoria
Commissioning Date	August 2011
Technology of Generating Unit including make and model	32 x 2.1 MW SUZLON S88 wind turbines - asynchronous induction generator
Maximum power generation capacity of all embedded generating units comprised in the relevant generating system	67.2 MW (output constrained to 63 MW)
Contributions to Fault Levels	3 kA (3 ph, ph-g & ph-ph-g)
Size and Rating of relevant transformer	70/39 MVA (ONAF/ONAN)
Single Line Diagram of the Connection Arrangement	See below
Protection Systems and Communication Systems	Duplicate current differential protection over optical fibre communications link between NRB and OWF
Voltage Control and Reactive Power Capability	Voltage Control with droop. Reactive Power capability - Import =30.2 MVar, Export = nil

Mortons Lane and Oaklands Hill Wind Farm - Connection Arrangement



Name	Coonoor Bridge Wind Farm
Location	25 km south of Charlton, Victoria
Commissioning Date	February 2016
Technology of Generating Unit including make and model	6 x 3.3 MW Vestas V117 wind turbines - full scale converter
Maximum power generation capacity of all embedded generating units comprised in the relevant generating system	19.8 MW
Contributions to Fault Levels	0.535 kA (3 ph, ph-g & ph-ph-g)
Size and Rating of relevant transformer	1 x 24 MVA (ONAF)
Single Line Diagram of the Connection Arrangement	See below
Protection Systems and Communication Systems	Duplicate current differential protection over optical fibre communications link between CTN and CBW.
Voltage Control and Reactive Power Capability	Power factor control. Reactive Power Capability - Import = 9.6 MVar, Export = nil

Coonoor Bridge Wind Farm - Connection Arrangement



Name	Victorian Comprehensive Cancer Centre (VCCC)
Location	711 Elizabeth Street, Melbourne
Commissioning Date	February 2015
Technology of Generating Unit including make and model	3 x 2.575 MVA Cummins standby generators Type – LVS1804R
Maximum power generation capacity of all embedded generating units comprised in the relevant generating system	6.18 MW
Contributions to Fault Levels	3 phase = 0.396 kA
Size and Rating of relevant transformer	HV customer; transformers detail not provided
Single Line Diagram of the Connection Arrangement	See below
Protection Systems and Communication Systems	Feeder protection. Optical fibre
Voltage Control and Reactive Power Capability	Refer to VCCC. Bump-less transfer, one at a time (approx. 60 milliseconds) - no export, parallel only for 2 to 3 cycles through high speed switches. Back up supply only, not co-generation

Victorian Comprehensive Cancer Centre (VCCC)

